Research Paper

Influence of Internet Addiction and Academic Procrastination on Academic Achievement of Secondary & Senior Secondary School Students

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ABSTRACT

This correlational study investigated the influence of internet addiction and academic procrastination on the academic achievement of secondary & senior secondary school students in the Delhi-NCR region. Data from 140 students were collected through purposive sampling. The mean age of students was 16.04 (SD = 1.35) years. Academic achievement was assessed using students' marks from previous exams, while academic procrastination was measured using the Academic Procrastination Scale (Kalia & Yadav, 2015). Internet addiction levels were evaluated using the Internet Addiction Test (IAT; Young, 1998). Results indicated that a significant proportion of students spend considerable time on mobile devices, with a majority dedicating 2 to 3 hours and a notable segment spending over 5 hours. Academic achievement averaged 82.14%, with females outperforming males, indicating a gender difference in performance. Analysis of academic procrastination revealed its prevalence among students, with higher levels associated with lower academic achievement and increased mobile device usage. Internet addiction levels varied among students, with moderate levels being the most prevalent. However, no significant gender differences were observed. Higher internet addiction correlated with increased academic procrastination, suggesting an interplay between these behaviors. Correlation analysis showed that higher academic achievement correlates with reduced academic procrastination and internet addiction, as well as less time spent on mobile devices. Conversely, increased mobile usage was associated with higher levels of academic procrastination and internet addiction. Additionally, a moderate positive correlation existed between academic procrastination and internet addiction. These findings illuminate the intricate dynamics between mobile usage, academic performance, procrastination, and internet addiction among students, underscoring the need for educational interventions. The study's implications extend beyond academic research, offering actionable insights that can inform educational practices and policies aimed at promoting healthy technology use and fostering academic success among students.

Keywords: *Internet Addiction, Academic Procrastination, Academic Achievement, Technology, Mobile Usage*

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In contemporary society, the internet has undergone a profound transformation from a novelty to an indispensable aspect of daily life, fundamentally altering the way individuals communicate, learn, and engage with the world. The digital revolution has permeated nearly every aspect of society, with the internet serving as a gateway to vast reservoirs of information, communication networks, and virtual communities (Hargittai & Hsieh, 2010). Secondary and senior secondary school students, in particular, have become deeply entrenched in this digital landscape, leveraging the internet for a myriad of purposes including educational pursuits, social interaction, entertainment, and beyond.

The educational landscape has been significantly reshaped by the integration of digital technologies, with classrooms evolving into dynamic learning environments enriched by multimedia resources, online collaboration tools, and interactive learning platforms (Prensky, 2001). Students routinely harness the power of the internet to access educational materials, conduct research, collaborate on projects, and engage in virtual classrooms. The proliferation of educational websites, online courses, and digital libraries has democratized access to knowledge, empowering students to explore diverse subjects and perspectives at their own pace (Attewell, 2005).

Moreover, social interaction has been profoundly influenced by the advent of social media platforms, instant messaging apps, and online forums, which have revolutionized the way individuals connect, communicate, and share experiences (Boyd & Ellison, 2007). For secondary and senior secondary school students, social media plays a central role in maintaining social networks, fostering peer relationships, and staying connected with friends and classmates. The ability to instantly communicate and share updates via platforms like Facebook, Instagram, and Snapchat has become integral to the social fabric of adolescent life (Lenhart, 2015).

In addition to its educational and social functions, the internet serves as a boundless source of entertainment and recreation for students, offering an array of multimedia content, online games, and streaming services (Vorderer et al., 2004). Whether binge-watching television series on streaming platforms, exploring virtual worlds in online games, or consuming user-generated content on platforms like YouTube, students are constantly immersed in a digital ecosystem teeming with entertainment options.

However, alongside the myriad benefits of internet usage, concerns have arisen regarding its potential to foster addictive behaviors among adolescents. The omnipresence of digital devices, coupled with the allure of immersive online experiences, has given rise to phenomena such as internet addiction, characterized by compulsive and excessive internet usage (Griffiths, 1998). For secondary and senior secondary school students, the boundary between productive internet use and excessive indulgence can become blurred, leading to detrimental effects on academic performance, mental health, and overall well-being.

Internet Addiction
Firstly, it is imperative to provide a comprehensive understanding of the concept of internet addiction. Internet addiction, also known as problematic internet use or compulsive internet use, refers to the excessive and uncontrollable usage of the internet, which results in negative consequences across various domains of an individual's life (Young, 1998). These negative consequences may manifest in academic performance, social relationships, mental health, and overall well-being.

According to Young (1998), individuals exhibiting symptoms of internet addiction often display compulsive behaviors, such as spending excessive amounts of time online, neglecting real-life responsibilities, and experiencing withdrawal symptoms when offline. Furthermore, internet addiction can lead to detrimental effects on cognitive functioning, including impaired decision-making abilities and decreased attention span.

The proliferation of smartphones, social media platforms, online gaming, and other digital technologies has significantly contributed to the escalating concerns surrounding internet addiction among adolescents. With the omnipresence of internet-enabled devices and high-speed internet connectivity, adolescents have unprecedented access to a vast array of online content and interactive experiences. This constant connectivity blurs the boundaries between virtual and real-world interactions, making it increasingly challenging for individuals to disengage from online activities.

Moreover, the gamification elements embedded within many online platforms, such as rewards, achievements, and social validation, can intensify the allure of internet usage and contribute to addictive behaviors (Griffiths, 2000). The immersive nature of online gaming and social media platforms further reinforces the addictive potential of the internet, as users become engrossed in virtual environments that offer instant gratification and social validation.

The pervasive influence of social media, in particular, has been identified as a significant contributing factor to internet addiction among adolescents (Kuss & Griffiths, 2011). The incessant need to stay connected, curated self-presentation, and fear of missing out (FOMO) drive individuals to compulsively check their social media feeds and engage in online interactions, often at the expense of real-life relationships and activities.

Academic Procrastination
On the other hand, academic procrastination, a prevalent issue among students, involves the habitual delay of academic tasks despite awareness of the negative consequences it entails (Steel, 2007). This behavior pattern often leads to suboptimal academic performance and heightened stress levels among students. Steel (2007) highlights that procrastination not only undermines academic achievement but also contributes to increased stress and anxiety levels, creating a detrimental cycle that further perpetuates procrastination and academic underachievement.

The digital age has introduced unprecedented accessibility to entertainment, social media, and non-academic content, thereby exacerbating tendencies toward academic procrastination. With smartphones, tablets, and laptops readily available, students are constantly tempted to engage in online distractions rather than focusing on their academic responsibilities (Steel, 2007). The allure of instant gratification provided by social media notifications, streaming services, and online gaming platforms competes with the long-term benefits of completing academic tasks in a timely manner.

Academic Achievement
Academic achievement, as defined by Baker and Sigmon (2015), encompasses the level of success or proficiency attained by a student in various educational endeavors, typically measured through assessments, examinations, grades, and other academic evaluations. It signifies the acquisition of knowledge, skills, and competencies across different subject areas

and academic disciplines, reflecting a student's overall academic performance and progress. This definition aligns with McKenzie's (2015) explanation, which emphasizes the importance of academic achievement as a key indicator of a student's academic abilities, intellectual development, and readiness for further education or employment opportunities.

In this study, academic achievement is operationalized by measuring the grades students scored in their previous exams. These grades not only represent quantitative assessments but also qualitative evaluations of students' comprehension, application, and retention of knowledge across various subjects. By utilizing grades from previous exams, the study aims to assess students' performance levels and their ability to meet academic standards and expectations. These grades serve as tangible indicators of students' academic progress and success within the educational context being studied.

Influence of Internet Addiction and Academic Procrastination on Academic Achievement

Internet addiction and academic procrastination are two significant factors that can influence the academic achievement of secondary and senior secondary school students. Research has shown that excessive internet use can lead to negative outcomes, including decreased academic performance (Chou & Hsiao, 2000). Similarly, academic procrastination, characterized by delaying academic tasks despite knowing the negative consequences, has been linked to lower grades and academic achievement (Steel, 2007).

Firstly, internet addiction can impact academic achievement by diverting students' attention away from their studies. Students who spend excessive amounts of time online may neglect their academic responsibilities, resulting in poor performance in school (Chou & Hsiao, 2000). Moreover, excessive internet use can lead to a decline in study habits and time management skills, further exacerbating academic difficulties (Kuss, 2013). For example, students who spend hours on social media or gaming platforms may prioritize these activities over completing assignments or studying for exams, ultimately leading to lower grades.

Similarly, academic procrastination can hinder academic achievement by causing students to delay or avoid completing important tasks until the last minute. Procrastination often results in rushed or incomplete work, leading to subpar academic performance (Steel, 2007). Additionally, procrastination may create feelings of stress and anxiety, further impeding students' ability to focus and perform well academically (Tice & Baumeister, 1997).

Furthermore, there is evidence to suggest that internet addiction and academic procrastination may be interconnected. Students who are prone to procrastination may turn to the internet as a form of distraction or avoidance behavior (Kuss & Griffiths, 2017). This can create a vicious cycle where students procrastinate by spending time online, which in turn exacerbates their academic difficulties and contributes to further procrastination.

Therefore, internet addiction and academic procrastination can have detrimental effects on the academic achievement of secondary and senior secondary school students. It is essential for educators, parents, and policymakers to recognize the impact of these factors and implement strategies to help students develop healthy internet habits and effective time management skills to promote academic success. This study seeks to address the intertwined nature of internet addiction and academic procrastination among secondary and senior secondary school students. By examining the prevalence of internet addiction and its correlation with academic procrastination, we aim to gain insights into the underlying factors

contributing to these behaviors and their impact on academic achievement. Understanding these factors is essential for developing effective interventions and support mechanisms to mitigate their adverse effects on students' academic performance and psychological well-being.

Objectives
1. To study the academic achievement of school students.
2. To study the prevalence of internet addiction among school students.
3. To study academic procrastination among school students.
4. To study the gender difference in academic achievement among school students.
5. To study the gender difference in academic procrastination among school students.
6. To study the gender difference in internet addiction among school students.
7. To examine the impact of internet addiction on academic procrastination among school students.
8. To examine the impact of internet addiction on academic achievement of school students.
9. To examine the impact of academic procrastination on the academic achievement of school students.

Hypotheses
1. There will be a significant gender difference in academic achievement among school students.
2. There will be a significant gender difference in academic procrastination among school students.
3. There will be a significant gender difference in the levels of internet addiction among school students.
4. Internet addiction will have a significant negative impact on the academic achievement of school students.
5. Academic procrastination will have a significant negative impact on the academic achievement of school students.
6. Internet addiction will have a significant positive impact on academic procrastination among school students.

METHODS
Sample

Data from 140 students (secondary and senior secondary school students) were collected using purposive sampling. The mean age of the students was 16.04 (SD = 1.35) years. Among 140 participants, 87 were female (62.1%) and 53 were male (37.9%). This suggests that the study had a higher representation of female respondents compared to males. The respondents were distributed across different classes, with the majority being from 10th, 11th, and 12th grades. Specifically, 47 respondents (33.6%) were from the 10th grade, 40 (28.6%) were from the 11th grade, and another 40 (28.6%) were from the 12th grade. A smaller portion of the sample, 13 respondents (9.3%), were from the 9th grade. This distribution indicates a relatively even representation across different grade levels, with a slight emphasis on the higher grades. Among the respondents, 43 (30.7%) came from Joint Families, 88 (62.9%) from Nuclear Families, and 9 (6.4%) from Single Parent Families.

Table 1: Demographic characteristics of the participants

	N	%
Gender		
Female	87	62.1
Male	53	37.9
Class		
10th	47	33.6
11th	40	28.6
12th	40	28.6
9th	13	9.3
Family Structure		
Joint Family	43	30.7
Nuclear Family	88	62.9
Single Parent Family	9	6.4

Tools

The following tools were employed in the present study to collect data from the participants:

1. **Academic Achievement**

   Students' academic achievement was measured using their marks obtained in previous exams.

2. **Academic Procrastination**

   The Academic Procrastination Scale (Kalia, A.K. and Yadav, M., 2015) was used to assess the academic procrastination of students. The scale is applicable for the age group 10-19 years. The total item contained in the scale was 25 out of which 16 were positive and 9 were negative items. In the Academic Procrastination Scale, each item was provided with five alternatives ranging from Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree which carries marks 5,4,3,2 and 1 respectively for positive items responses and 1,2,3,4 and 5 for negative items response. The adolescents were asked to mark each item with the appropriate response. The score was obtained by adding the scores on all the individual items under each dimension of academic procrastination. The sum of all the 25 items gave the Global Academic Procrastination score of the individual. The possible maximum and minimum scores of the individual were 125 and 25 respectively. A High score on the scale indicated more involvement in Academic Procrastination and a low score indicated less involvement in Academic Procrastination. The reliability of the scale is 0.73 and the validity is 0.84. Scores of 66 and above suggest High Academic Procrastination, Scores between 29 and 65 indicate Moderate Academic Procrastination and Scores up to 28 reflect Low Academic Procrastination.

3. **Internet Addiction**

   Internet Addiction Test (IAT; Young, 1998) was used to assess the level of internet addiction of students. It consists of 20 questions, each item is scored using a five-point Likert scale, and a graded Response can be selected (0 = "does not apply" to 5 = "always"). It covers the degree to which internet use affects daily routine, social life, productivity, sleeping patterns, and feelings. The minimum score is 20 while the maximum is 100 and the higher the score the greater the level of internet addiction. The types of Internet-user groups were identified in accordance with the original scheme of Young and a score less than 20 indicates normal users. The scores ranging from 20 to 49 indicate minimal users, while scores from 50 to 79 indicate moderate users and the scores from 80 to 100 indicate excessive users. The minimal users were

classified as problematic internet users. While moderate and excessive users were categorized as internet addicts. The instrument has exhibited good psychometric properties in previous research. The reliability of this questionnaire is 0.899 in Cronbach's Alpha (Sally, 2006).

4. **Demographic Information Sheet**

   A demographic information sheet was used to collect students' details such as age, gender, type of school, class, family structure, duration of mobile usage, etc.

Procedure

A correlational study was designed and the above-mentioned questionnaires were used to collect data from secondary and senior secondary school students of Delhi-NCR region from December 2023 to February 2024. The students were requested to fill out the demographic information sheet first and then other questionnaires later. The data was collected online using Google Forms. Informed consent from the parents of students was taken to ensure ethical considerations.

Statistical Analysis

Descriptive statistics was used for data analysis. The data was analyzed using Mean, Standard deviation, t-test and Pearson correlation coefficient.

RESULTS

The data collected from the school students were analysed using statistical techniques and have been presented using tables and graphs in this section. The results obtained have been discussed under various headings such as frequency distribution of time spent by students on mobile, levels of internet addiction and academic procrastination, mean scores and SDs of continuous variables, gender difference in academic achievement, academic procrastination and internet addiction, and the relationship between variables under study.

Table 2 Frequency distribution of time spent by students on mobile usage

	N	%
Time Spent on Mobile		
1-2 hours	11	7.9
2-3 hours	43	30.7
3-4 hours	27	19.3
4-5 hours	25	17.9
More than 5 hours	34	24.3

Time spent by students on mobile usage

Table 2 presents the frequency distribution of time spent by students on mobile usage. Among the respondents, the highest proportion, comprising 30.7% of the sample, reported spending 2 to 3 hours on mobile devices. Following this, 19.3% of students indicated spending 3 to 4 hours, while approximately 17.9% reported spending 4 to 5 hours. Notably, a significant portion of students (24.3%) stated that they spent more than 5 hours on mobile usage. Conversely, the smallest proportion, accounting for 7.9% of respondents, reported spending 1 to 2 hours on mobile devices. This distribution highlights varying degrees of mobile device engagement among the student population, with a notable segment dedicating extensive periods to mobile usage. Such findings underscore the importance of understanding the implications and behaviors associated with prolonged mobile device usage among students.
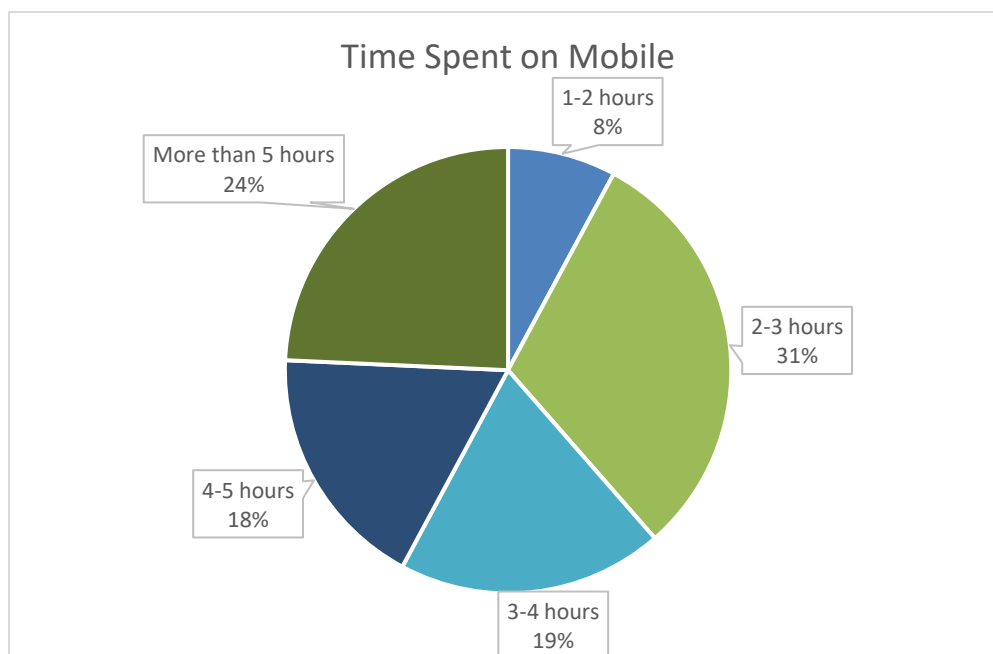
Fig. 1: Frequency distribution of time spent by students on mobile usage

Table 3 Mean scores and SDs of age, academic achievement, academic procrastination, and internet addiction of students

	Mean	**SD**
Age	16.04	1.35
Academic Achievement	82.14	11.74
Academic Procrastination	72.94	14.16
Internet Addiction	42.47	18.65

Academic Achievement

The data provided in Table 3 indicates that the mean academic achievement score among the sample population was 82.14 (SD = 11.74). This suggests that, on average, students scored approximately 82.14% marks in their last academic assessments.

In Table 6, the mean scores and standard deviations (SDs) of male and female students for academic achievement, along with corresponding t-values, are presented. The analysis compared the academic achievement scores between male and female students.

The mean academic achievement score for male students was 79.26 (SD = 12.07). In contrast, female students had a higher mean score of 83.89 (SD = 11.25). The t-value for the comparison between male and female students' academic achievement scores was -2.296, with degrees of freedom (df) equal to 138. This t-value indicated the magnitude of difference between the means relative to the variability within the groups. The associated p-value (p) was .023, which was less than the conventional significance level of .05, indicating that the observed difference in mean academic achievement scores between male and female students was statistically significant. Overall, these findings suggested that female students tended to have higher academic achievement scores compared to male students in the sampled population.

Therefore, we accept hypothesis 1 "There will be a significant gender difference in academic achievement among school students."
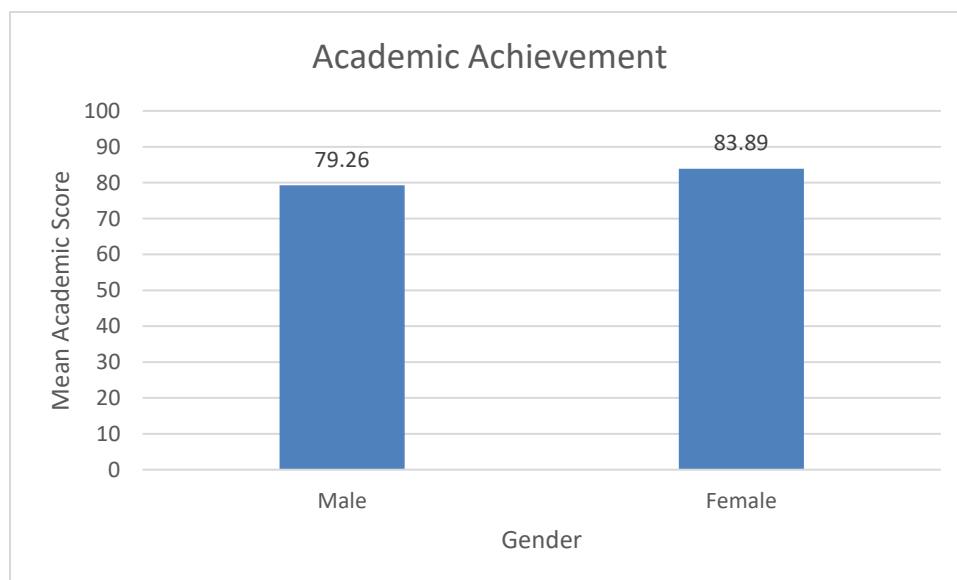
Fig. 2: Mean academic achievement scores of male and female students

Table 4 Frequency distribution of levels of academic procrastination among students

Levels of Academic Procrastination	N	%
High Academic Procrastination	90	64.3
Moderate Academic Procrastination	50	35.7

Academic Procrastination

In Table 3, the mean scores and standard deviations (SDs) of academic procrastination among students were presented. The data showed that the mean score for academic procrastination was 72.94 (SD = 14.16). This indicates the average level of procrastination behavior observed among the sampled students, with a measure of the variability of these scores around the mean. Higher standard deviation values suggest greater variability in procrastination levels among the students, while lower values imply more consistency. Overall, these findings provide insight into the central tendency and dispersion of academic procrastination scores within the student population.

In Table 4, the frequency distribution of levels of academic procrastination among students is presented. The data showed that 90 students, constituting 64.3% of the sample, were categorized as experiencing high levels of academic procrastination. On the other hand, 50 students, accounting for 35.7% of the sample, were classified as having moderate levels of academic procrastination. These findings indicate that a significant portion of the student population sampled exhibited high levels of procrastination in their academic activities, while a smaller proportion demonstrated moderate levels of procrastination.

Table 6 presents the mean scores and standard deviations (SDs) of academic procrastination among male and female students, along with the corresponding t-values. Male students had a mean score of 74.25 (SD = 13.70), while female students had a mean score of 72.15 (SD = 14.45). The t-value for the comparison between male and female students' academic procrastination scores was .849, with degrees of freedom (df) equal to 138, and the associated p-value (p) was .397. This indicates that the difference in mean academic procrastination scores between male and female students was not statistically significant.

Therefore, we reject hypothesis 2 "There will be a significant gender difference in academic procrastination among school students" and accept the null hypothesis.
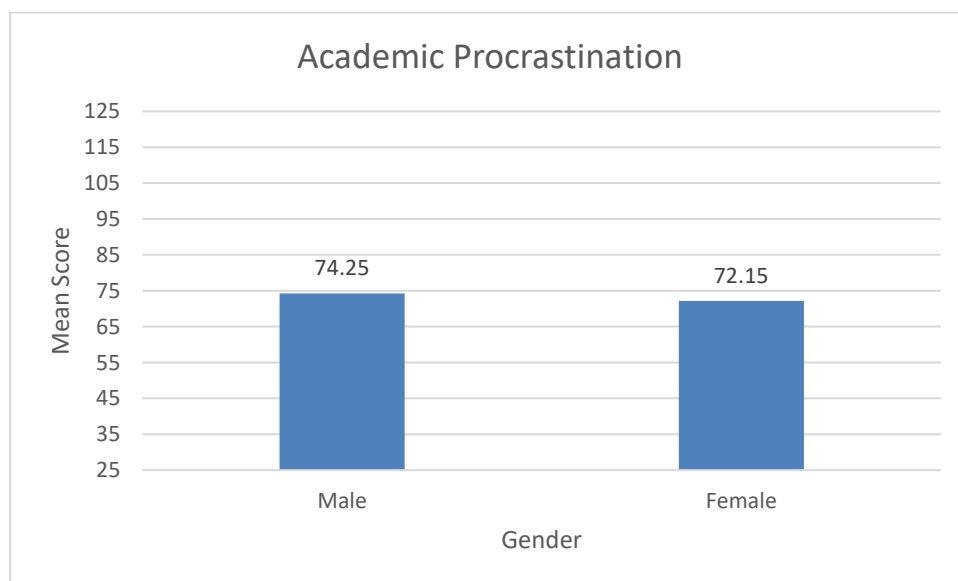

Fig. 3: Mean academic procrastination scores of male and female students

Table 5 Frequency distribution of levels of internet addiction among students

Levels of Internet Addiction	N	%
Mild	46	32.9
Moderate	48	34.3
Normal	42	30.0
Severe	4	2.9

Internet Addiction
In Table 3, the mean scores and standard deviations (SDs) of internet addiction among students were presented. The data showed that the mean score for internet addiction was 42.47 (SD = 18.65). This indicates the average level of internet addiction observed among the sampled students, with a measure of the variability of these scores around the mean. Higher standard deviation values suggest greater variability in internet addiction levels among the students, while lower values imply more consistency. Overall, these findings provide insight into the central tendency and dispersion of internet addiction scores within the student population.

In Table 5, the frequency distribution of levels of internet addiction among students is presented. The data indicated that among the sampled students, 46 individuals, accounting for 32.9% of the sample, exhibited mild levels of internet addiction. Additionally, 48 students, constituting 34.3% of the sample, demonstrated moderate levels of internet addiction. Moreover, 42 students, representing 30.0% of the sample, were categorized as having normal levels of internet addiction. Lastly, a small proportion of the sample, consisting of 4 students (2.9%), showed severe levels of internet addiction. These findings provide insights into the distribution of internet addiction severity among the student population, highlighting varying degrees of susceptibility to excessive internet usage.

Table 6 presents the mean scores and standard deviations (SDs) of internet addiction among male and female students, along with the corresponding t-values. Male students had a mean score of 43.42 (SD = 18.97), while female students had a mean score of 41.90 (SD = 18.55). The t-value for the comparison between male and female students' internet addiction scores was .466, with degrees of freedom (df) equal to 138, and the associated p-value (p) was .642. This suggests that the difference in mean internet addiction scores between male and female students was not statistically significant.

Therefore, we reject hypothesis 3 "There will be a significant gender difference in the levels of internet addiction among school students" and accept the null hypothesis.
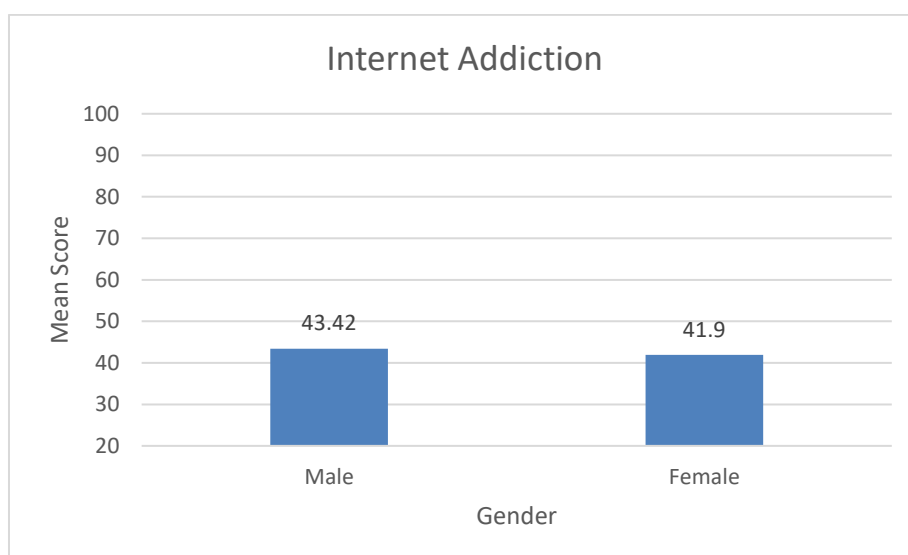

Fig. 4: Mean internet addiction scores of male and female students

Table 6 Mean scores and SDs of male and female students for academic procrastination, internet addiction, and academic achievement along with t-values

Variables	Gender	N	Mean	SD	t (df = 138)	p
Academic Procrastination	Male	53	74.25	13.70	.849	.397
	Female	87	72.15	14.45		
Internet Addiction	Male	53	43.42	18.97	.466	.642
	Female	87	41.90	18.55		
Academic Achievement	Male	53	79.26	12.07	-2.296	.023
	Female	87	83.89	11.25		

Relationship between variables
Table 7 displays the Pearson's correlation coefficients between age, academic achievement, time spent on mobile, academic procrastination, and internet addiction among students.

Age and Other Variables: The correlation coefficient between age and each of the other variables (academic achievement, time spent on mobile, academic procrastination, and internet addiction) was relatively low, ranging from -.076 to .080, indicating weak

correlations. These coefficients suggest that age had a minimal linear relationship with the other variables.

Academic Achievement and Other Variables: There was a moderate negative correlation between academic achievement and academic procrastination (r = -.309**) and a moderate negative correlation between academic achievement and internet addiction (r = -.256**), indicating that higher levels of academic achievement tend to be associated with lower levels of academic procrastination and internet addiction.

Therefore, we accept hypotheses 4 and 5 "Internet addiction will have a significant negative impact on the academic achievement of school students, and academic procrastination will have a significant negative impact on the academic achievement of school students" respectively.

Additionally, there was a weak negative correlation between academic achievement and time spent on mobile (r = -.189*), suggesting that higher academic achievement may be associated with slightly less time spent on mobile devices.

Time Spent on Mobile and Other Variables: The correlation coefficients between time spent on mobile and academic procrastination (r = .392**) and between time spent on mobile and internet addiction (r = .475**) were moderate and positive, indicating that greater time spent on mobile devices is associated with higher levels of academic procrastination and internet addiction.

Academic Procrastination and Internet Addiction: There was a moderate positive correlation between academic procrastination and internet addiction (r = .399**), suggesting that higher levels of academic procrastination tend to be associated with higher levels of internet addiction.

Therefore, we accept hypothesis 6 "Internet addiction will have a significant positive impact on academic procrastination among school students."

Table 7 Pearson's correlation coefficient between age, academic achievement, time spent on mobile, academic procrastination and internet addiction among students

	1	2	3	4	5
1. Age	1	.041	.080	.064	-.076
2. Academic Achievement	-	1	-.189*	-.309**	-.256**
3. Time Spent on Mobile	-	-	1	.392**	.475**
4. Academic Procrastination	-	-	-	1	.399**
5. Internet Addiction	-	-	-	-	1

*$p<0.05$; **$p<0.01$

DISCUSSION

This study was conducted to examine the influence of academic achievement, internet addiction and academic procrastination on academic achievement of secondary & senior secondary school students. This section provides valuable insights into the challenges and dynamics prevalent within the student population and seeks to contribute to the existing body of knowledge and inform future research directions and intervention strategies aimed at promoting positive academic outcomes and student well-being.

The analysis of time spent by students on mobile usage showed varying levels of engagement with mobile devices among students, with the highest proportion, comprising 30.7% of the sample spending 2 to 3 hours on mobile devices which highlights the need for further exploration into the implications and behaviors associated with prolonged mobile device usage among students.

The mean academic achievement score among the sample population was 82.14 (SD = 11.74), indicating that, on average, students scored approximately 82.14% marks in their last academic assessments. Descriptive analysis showed that female students (mean = 83.89, SD = 11.25) exhibited significantly higher academic achievement scores compared to male students (mean = 79.26, SD = 12.07) (t = -2.296, df = 138, p = .023). This finding aligns with previous research indicating that female students tend to outperform male students academically (Smith, 2018).

The mean score for academic procrastination among students was 72.94 (SD = 14.16), suggesting an average level of procrastination behavior within the sample population. The frequency distribution of levels of academic procrastination showed that 64.3% of students experienced high levels and 35.7% exhibited moderate levels. These results are consistent with studies highlighting the prevalence of academic procrastination among students (Steel, 2007). The descriptive analysis found that there was no statistically significant difference in academic procrastination scores between male and female students (t = .849, df = 138, p = .397), indicating that gender did not play a significant role in procrastination behaviors among the sampled population.

The mean score for internet addiction was 42.47 (SD = 18.65), indicating an average level of internet addiction among students. The frequency distribution of levels of internet addiction showed that varying proportions exhibited mild, moderate, normal, and severe levels of addiction. These findings are consistent with prior research highlighting the prevalence of internet addiction among adolescents (Kuss & Griffiths, 2012). The descriptive analysis showed that there was no statistically significant difference in internet addiction scores between male and female students (t = .466, df = 138, p = .642), suggesting that gender did not significantly influence internet addiction levels among the sampled population.

Pearson's correlation coefficients revealed weak correlations between age and other variables, indicating minimal linear relationships. Academic achievement demonstrated moderate negative correlations with academic procrastination (r = -.309**) and internet addiction (r = -.256**), suggesting that higher achievement was associated with lower procrastination and addiction levels (Choi et al., 2014). Additionally, moderate positive correlations were found between time spent on mobile and both academic procrastination (r = .392**) and internet addiction (r = .475**), indicating that increased mobile usage was associated with higher levels of procrastination and addiction (Lepp et al., 2014). A moderate positive correlation was also observed between academic procrastination and internet addiction (r = .399**), suggesting a relationship between these behaviors (Seyrek et al., 2020).

CONCLUSION

This study found that a considerable portion of students spent significant time on mobile devices, with the highest proportion dedicating 2 to 3 hours, and a noteworthy segment spending over 5 hours. This highlight varying degrees of engagement with mobile technology

among students, emphasizing the need for understanding the implications associated with prolonged usage. In terms of academic achievement, the average score was determined to be 82.14%, with females demonstrating higher scores compared to males, indicating a significant gender difference in academic performance. The analysis on academic procrastination revealed that a considerable portion of students exhibited high levels of procrastination, with moderate levels also prevalent. Interestingly, while there was no statistically significant difference in procrastination levels between genders, higher levels of procrastination were associated with lower academic achievement and greater time spent on mobile devices. Regarding internet addiction, the study found that students exhibited varying degrees of addiction, with moderate levels being the most prevalent. However, there was no significant difference in addiction levels between genders. Notably, higher levels of internet addiction were associated with higher levels of academic procrastination, suggesting a potential interplay between these two behaviors. The correlation analysis unveiled several noteworthy relationships between variables. Higher academic achievement was associated with lower levels of academic procrastination and internet addiction, as well as slightly less time spent on mobile devices. Moreover, greater time spent on mobile devices was positively correlated with higher levels of academic procrastination and internet addiction. Additionally, a moderate positive correlation was observed between academic procrastination and internet addiction, indicating a potential co-occurrence of these behaviors among students. Overall, these findings shed light on the complex dynamics between mobile usage, academic performance, procrastination, and internet addiction among students, underscoring the importance of addressing these factors in educational and intervention efforts. Further research and targeted interventions may be warranted to better understand and mitigate the negative consequences associated with excessive mobile usage and internet addiction among students.

Implications

The study yields several implications that could inform educational policies, interventions, and practices:

- **Guidelines for Mobile Usage:** The study highlights the need for educational policies to regulate mobile device usage among students, ensuring a balance between screen time and academic performance.
- **Targeted Interventions:** Tailored intervention programs can address procrastination and internet addiction, promoting academic success and student well-being.
- **Gender-Specific Support:** Recognizing gender differences in academic achievement suggests the importance of gender-specific support initiatives to address disparities in educational outcomes.
- **Digital Literacy Promotion:** Promoting digital literacy education equips students with skills to navigate online activities responsibly, enhancing academic productivity and personal well-being.
- **Collaborative Strategies:** Collaborative efforts among educators, parents, healthcare professionals, and policymakers are essential to develop comprehensive strategies for managing students' digital lives while prioritizing academic success.

The implications of the study extend beyond academic research, offering actionable insights that can inform educational practices and policies aimed at promoting healthy technology use and fostering academic success among students.

Limitations

- **Sampling Bias:** Potential limitations arise from the study's sample selection method, which may not fully represent the broader student population, impacting generalizability.
- **Self-Report Measures:** Reliance on self-reported data for variables like mobile usage and internet addiction introduces bias due to social desirability and recall inaccuracies.
- **Cross-Sectional Design:** The study's design limits establishing causal relationships between variables, hindering the depth of analysis.
- **Measurement Tools:** Validity and reliability concerns exist regarding tools used to measure variables like academic procrastination and internet addiction, affecting the accuracy of findings.
- **Generalizability:** Findings may lack applicability beyond the study context, influenced by cultural, educational, and socioeconomic factors, limiting broader implications.

Addressing these limitations in future research can enhance the validity, reliability, and applicability of findings related to student behaviors and academic outcomes.

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Conflict of Interest

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